

REMARKS

The Office Action of March 8, 2006 was received and reviewed. The Examiner is thanked for considering this application. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Prior to this Amendment, claims 1-10 were pending, of which claims 1-3 were withdrawn from consideration. By the above actions, claims 1-10 have been amended and new claims 11-15 have been added. Accordingly, claims 1-10 are pending, of which claims 1-3 remain withdrawn from consideration. In view of these actions and the following remarks, reconsideration of this application is now requested.

Initially, Applicants acknowledge that claims 1-3 have been withdrawn. However, for the completeness of record, and in case if the claims can be rejoined, Applicants have amended claims 1-3, as shown above.

In the detailed Office Action, claims 4 and 7 stand rejected under 35 U.S.C. §112, 2nd paragraph, as lacking proper antecedent basis for “signal processing” in claim 4 and “crystallinity of the semiconductor film” in claim 7. In response, Applicants have amended claims 4 and 7, as shown above, to improve the clarity of the claim language. Notwithstanding the claim amendments, Applicants respectfully submit that the step of “performing signal processing” claims 4 and 7 is properly recited. No lack of antecedent basis as alleged by the Examiner or any grammatical errors can be found in the recital of the step of performing signal processing in the claims. If the Examiner maintains this rejection, Applicants would respectfully request the Examiner to offer an explanation for the rejection.

Claims 4-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamaguchi. The Examiner contended that Yamaguchi does not exactly teaches sampling a part of a laser beam emitted from an oscillator but teaches a laser light is irradiated to a semiconductor thin film after the laser light irradiation is measured and conditions for the next laser light irradiation are adjusted based on the measured refractive index value.

Upon reviewing Yamaguchi, Applicants respectfully submit that Applicants’ claimed step of controlling a relative speed of a beam spot of a laser beam to an object so as to be in phase with fluctuation in energy of the laser beam is not taught, disclosed or suggested at all. In comparing and contrasting with Applicants’ claimed invention, in Yamaguchi, the measurement of a refractive index of a semiconductor thin film after laser light irradiation is

performed, wherein the conditions for next light irradiation are adjusted based on the measured refractive index value. The laser light irradiation conditions are adjusted so that semiconductor films always have the same refractive index, as disclosed in the abstract of Yamaguchi.

Furthermore, the refractive index used in the process of Yamaguchi is related to a flatness of a crystalline silicon film and is measured by the ellipsometry, as disclosed in, for example, column 7, lines 10-27 of Yamaguchi.

In contrast with the process of Yamaguchi, the independent claims 4-8 recite the steps of controlling a relative speed of a beam spot of a laser beam to an object so as to be in phase with fluctuation in energy of the laser beam; and sampling a part of a laser beam emitted from an oscillator. The steps recited in Applicants' pending claims are not related to a flatness of a crystalline silicon film, and Applicants' claimed invention does not need to measure a refractive index to control a laser beam spot. Thus, the sampled data in Yamaguchi is different from the sampled data recited in the independent claims 4-8.

Further, the present application has an advantage that the laser irradiation method can be applicable widely to any object because of no limitation with respect to the flatness of the object.

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. Because Yamaguchi fails to teach, disclose or suggest the steps of controlling a relative speed of a beam spot of a laser beam to an object so as to be in phase with fluctuation in energy of the laser beam; and sampling a part of a laser beam emitted from an oscillator, a *prima facie* case of obviousness has not been established.

Further, there is no suggestion or motivation for modifying the method that relies on measurement of refractive index of Yamaguchi to arrive at Applicants' claimed invention to include the step of controlling a relative speed of a beam spot of a laser beam to an object so as to be in phase with fluctuation in energy of the laser beam; and sampling a part of a laser

beam emitted from an oscillator. Still further, the Examiner has not address the likelihood of success if the two different methods of the presently claimed invention and of Yamaguchi were combined.

Additionally, as the method of measuring refractive index of an irradiated semiconductor film to control subsequent irradiation of the film is completely different from Applicants' claimed invention, optimization does not appear to be an option or proper reasoning for modifying the disclosed method of Yamaguchi.

At this juncture, Applicants have further amended claims 1-10 to clarify the controlling step. Further, Applicants have further amended claims 1-4, 6, 8 and 10 to correct minor typographical errors. That is, "an beam" is changed to "a beam" in claims 1, 2, 4, 7 and 8, a period is deleted in claim 6, and "a amplitude" is changed to "an amplitude" in claims 8 and 10. Still Further, Applicants have added new dependent claims 11-14 to further complete the scope to which Applicants are entitled.

In view of the amendments and arguments set forth above, Applicants respectfully requests reconsideration and withdrawal of all the pending rejections.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with Applicant's representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby by expedited.

Respectfully submitted,



Luan Do

Registration No. 38,434

NIXON PEABODY LLP
Suite 900, 401 9th Street, N.W.
Washington, D.C. 20004-2128
(202) 585-8000